

**Amendments to the Abstract:**

The abstract of the disclosure has been amended in the following manner:

The invention relates to a method for x-ray examination of an object where two categories of materials are taken into consideration, comprising: the use of broad spectrum x-rays; measurements of the x-rays by bands of the spectrum; expressions ( $M^2 \hat{M}$ ) of thicknesses or masses of the two categories of materials passed through by the x-rays, the expressions ( $M^2 \hat{M}$ ) being functions of at least two of the measurements ( $mes_k$ ) and coefficients (A); and applying a selection criterion from among the expressions ( $M^2 \hat{M}$ ) to deduce from this an expression (final  $M^2 \hat{M}$ ) considered true; characterized in that the selection criterion comprises a combination (f) of the expressions with weighting factors (a), and a calculation of the weighting factors such that the combination has minimal variation according to variations of the measurements.

**Attachment:** Replacement Sheet (clean-copy of abstract)

Abstract

The invention relates to a method for x-ray examination of an object where two categories of materials are taken into consideration, comprising: the use of broad spectrum x-rays; measurements of the x-rays by bands of the spectrum; expressions ( $\hat{M}$ ) of thicknesses or masses of the two categories of materials passed through by the x-rays, the expressions ( $\hat{M}$ ) being functions of at least two of the measurements ( $mes_k$ ) and coefficients (A); and applying a selection criterion from among the expressions ( $\hat{M}$ ) to deduce from this an expression (final  $\hat{M}$ ) considered true; characterized in that the selection criterion comprises a combination (f) of the expressions with weighting factors (a), and a calculation of the weighting factors such that the combination has minimal variation according to variations of the measurements.